CORRECTIONAL DENTAL ASSOCIATES

HAZARD COMMUNICATION STANDARD

Reviewed 11/1/2014

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HAZARD COMMUNICATION STANDARD

It is the responsibility of Correctional Dental Associates to provide a safe and healthful working environment to all employees. These rights are provided to you under the Occupational Safety and Health Act. The Hazard Communication Standard, which is part of this Act, basically states that when there are any potential chemical hazards present in the workplace the employee has the right to know what those hazards are and how to protect themselves from them. Your rights under the law are outlined and posted in each dental clinic.

In order to comply with the law, CDA has compiled the necessary information from a variety of sources and developed this manual. It is important to become familiar with this system by first reviewing the manual and the video training tapes, if applicable.

General Employee Training in each region will be conducted once a year.

Special training sessions, as required (if new hazards come into the office), will occur throughout the year. If a new employee should be hired, training will occur before they assume the duties of that new position.

Procedures for updating or changing information in this safety compliance program will be as follows: Indicate where you will post new information, e.g. upgrades, MSDS, etc., prior to placing them in the manual, giving employees the opportunity to review the new data.

It is the right of all employees to have access to the binder containing the Hazard Communication Program. It will always be located in each clinic for review. The manual contains Material Safety Data Sheets (MSDS) for hazardous materials contained in our workplace. Review the MSDS poster to properly understand how to interpret the MSDS.

This section contains important information about the Hazardous Materials in our workplaces.

The First Aid Section will provide each employee with information about first aid for hazardous chemicals and must be reviewed by all employees.

After reviewing the contents of the CDA OSHA COMPLIANCE MANUAL as described above, direct any questions you may have about any aspect of the law to your Regional CDA Administrative Staff. They function as the the Safety Compliance Coordinators (SCC).

From time to time, new hazardous materials will enter the workplace. When this occurs, the Safety Compliance Coordinator will post the new MSDS on the staff bulletin board where it will remain for two weeks. After this time, it will be placed in the MSDS section of the manual and will be listed in the index.

All CDA employees shall be trained on the specific hazardous chemicals present in this workplace. These are listed on the Chemical Inventory List. All employees should be aware that the easiest way to detect the release of any of these hazardous chemicals into the work area is by their odor. Permissible Exposure Levels (PEL's) are located on the appropriate MSDS.

The physical and health hazards of the hazardous materials located in this workplace will now be discussed by the category of hazard.

First, the materials considered combustible include:

Isopropyl Alcohol
Liquified Petroleum Gas - Butane
Trichlorofluoromethane - Handpiece Lubricant
Toluene Isopropanol - Tray Adhesive
Methyl Methacrylate Monomer - Repair Acrylic Liquid
Lysol Spray
Acetone - Rubber Base Adhesive
Camphorated Parachlorophenol
Copalite - Chloroform
Formocresol
Methyl Alcohol
Alcohol Cleaning Pad

ADDITIONS:

_____
_____
_____
_____

It is important to not ever let these materials come into contact with heat or open flame. Should this occur, an A, B, C, rated extinguisher is located in each facility.

The Safety Compliance Coordinator will instruct all employees in its use. In addition, the SCC will describe the fire evacuation plan for this facility.

Secondly, reactive materials in this workplace include:

Methyl Methacrylate with strong oxidizing and reducing agent
IRM liquid with strong oxidizing agent
Hydrogen Peroxide with any reducing agent
Formocresol with strong alkalies
Oil of clove with Ferric Chloride and Potassium Permanganate
Fixing and Developing Solution with strong acids
Copanol with strong oxidizing agent

ADDITIONS:_____
_____
_____
_____
_____
_____
_____

It is extremely important that reactives not be stored in close proximity to each other or to the materials they are reactive with.

Materials that have potential health hazards in this workplace include:

Alginate	IMS Daily Cleaner
Butane	IRM Liquid
Bonding Agent	Isopropyl Alcohol
Bonding Agent	Jet Acrylic Liquid
Camphorated Parachlorophenol	Ketac Bond Aplicap Liquid
Cavicide	Ketac Bond Liquid
Cetylcide	Ketac Silver Liquid
Cidex	Liquid Bleach
Chloroform - Copalite	Lucitone Liquid
Developer	Lysol Disinfectant Spray
Dispersealloy	Methyl Alcohol
Durelon Liquid	Primer
Eugenol	Probond All Purpose Bonding Agent
Fixer	Rubber base
Formocresol	Scotchbond Etching Gel
Handpiece Lubricant	Tray Adhesive
Hybond ZOE Cement Liquid	Ultrasonic Cleaning Solution
Hydrogen Peroxide	ZOE Temporary Cement

To control the potential health hazards of these materials, control measures including; vent fans, respiratory protection, safety glasses, ear plugs, face shields, nitrile gloves and fluid resistant clothing are used.

In case of accident, the following emergency equipment is available for each CDA clinic; eye washes, emergency kits (located in each adjacent medical department), and spill kits, etc.

The following staff members are First Aid, BCLS, and ACLS qualified and are to be immediately notified in case of Emergency:

All CDA staff members are CPR Certified.

911 and Emergency Phone Numbers are posted on all phones. The following staff members and their duties in an Emergency are as follows:

Name	**Contact #**	**Duties**
Dr. Leslie A. Hayling, Jr.	(609) 406-4141	Statewide Emergency Coordination
Mr. Ricardo G. Aguilos	(609) 538-3378	Statewide Emergency Coordination

After a thorough understanding of this written training program, all employees will sign the CDA Employee Training Contract. After each individual training session, the CDA Employee Training Record shall be signed.

The type of training rendered will be indicated.

Remember, it is your right, as an employee, to ask any safety related questions. If you do not understand some part of this training program or its content, immediately direct your questions to the Safety Compliance Coordinator.

MATERIAL SAFETY DATA SHEETS
(MSDS)

Material Safety Data Sheets (MSDS) are fundamental parts of a successful Hazard Communication Program. These forms provide the necessary information regarding the chemical substances contained within a product, what the safe handling procedures are, what procedures to follow when the product is spilled, and the First Aid procedures when there is an accident.

MSDS's are the responsibility of the manufacturers or importers of all chemicals. All distributors of products are responsible to provide MSDS to their customers.

OSHA defines a "Hazardous Chemical" as any chemical which is a physical or health hazard.

Physical Hazards are identified as:

1. Combustible liquid
2. Compressed gas
3. Explosives
4. Flammable; a. aerosol, b. gas, c. liquid, d. solid
5. Organic peroxide
6. Oxidizer
7. Pyrophoric
8. Unstable/reactive
9. Water reactive

Health Hazards are identified as:

1. Carcinogen
2. Toxic agent
3. Highly toxic agent
4. Reproductive toxin
5. Irritant
6. Corrosive (to tissue)
7. Sensitizer
8. Hepatoxin (liver)
9. Nephrotoxin (kidney)
10. Neurotoxin (nervous system)
11. Agents that effect the hematopoietic (blood) system
12. Agents that damage lungs, skin, eyes or mucous membranes

Our product inventory list has a numerical cross-reference. All products brought into our facility are assigned a number when recorded on our inventory list, and the same number is placed on the product for easier identification during an emergency.

Understanding Material Data Safety Sheets

All information on MSDS's will be written in English. The hazardous chemical is identifed on the MSDS in the same manner as shown on the product label. This may be a chemical name, code name, number or trade name.

The Manufacturer's Section shows the manufacturer, importer, employers or other responsible party that prepared or distributed the MSDS. These persons and/or organizations are an excellent source for additional information on the appropriate emergency measure to take if there is an incident. This section also includes the mailing address, telephone number, emergency telephone number and Telex / fax number.

The Chemical Abstract Number is an optional number that might also be included on the MSDS. This number identifies the specific compound(s) contained in the product and allows identification of the compound regardless of the name used to identify the product.

The Date Prepared gives the date the MSDS was prepared and also provides a reference when updated MSDS's have been prepared. If a chemical manufacturer or importer becomes aware of new significant information regarding the hazards of a chemical, or ways to protect against the hazards, this new information is required to be added to the MSDS (in the form of an updated MSDS), and must be distributed to the consumers within a three month period.

Material Identification & Hazards Components list the chemical and common names of all ingredients that have been identified as reportable health hazards.

If the hazardous chemical is a single substance, it's chemical name and common names (synonyms) are listed. The common names listed should be those used ordinarily in use for that product.

If the hazardous chemical is a mixture, which has been tested as a whole to determine its hazardous properties, the chemical and common names of the ingredients that contribute to those known hazards and the common names for the mixture are listed.

If the hazardous chemical is a mixture, which has not been tested as a whole, the chemical and common names are listed for all ingredients that are:

1. Determined to be health hazards and which comprise 1% or more of the mixture.
2. Identified as carcinogens and present at .01% or greater.
3. Determined to present a physical hazard when present in the mixture.

Physical and Chemical Characteristics tells what the material or mixture is like and how it behaves. The conditions of testing include the temperature scale (Centigrade or Fahrenheit) used is shown for each entry. This information is useful for the design of ventilation systems and for providing adequate fire and spill containment equipment and procedures.

1. Boiling point refers to the temperature at which a material boils, in degrees Fahrenheit, under ordinary atmospheric pressure. If the material is a mixture, a boiling range is usually given.
2. Vapor Pressure indicates how much vapor the material may give off. It refers to the pressure of saturated vapor above the liquid and is usually measured by at 20 degrees Centigrade (68F) and is given in millimeters in mercury. The vapor pressure and the temperature, where measured, is also given. A high vapor pressure indicated that a liquid will evaporate easily.
3. Vapor Density tells how heavy the pure gaseous form of the material is in relation to air. The weight of a given volume of a vapor or gas is compared with the weight of an equal volume of air. Values should be given in the ambient temperature range of 60 degrees Fahrenheit. High vapor densities pose a particular problem because these vapors will collect in the bottom of the tanks.

Water Solubility indicates the solubility of the material in distilled water at 50 degrees Fahrenheit. Solubility may be given in weight percent or the following terms may be used instead of numbers.

Negligible..... means less than 0.1% solubility
Slight..... means 0.1 to 1% solubility
Moderate..... means 1 to 10% solubility
Appreciable..... means more than 10% solubility
Complete..... means soluble in all proportions

Specific Gravity shows how heavy the material is compared to water and tells whether it will float or sink. The weight of a given volume of water at 39.2 degree Fahrenheit.

Specific Gravity Table
1.0..... The material is the same weight as water.
above 1.0.....The material is heavier than water.
below 1.0.....The material is lighter than water.

Evaporation Rate states the time required for evaporation to happen. However, evaporation rates are calculated two ways and so the exact method of calculation must be known. The first method of calculation is using ethyl either as a basis for highly volatile solvents. If the values are greater than 1.0 this indicates less rapid evaporation than either. When butyl acetate is used for less volatile solvents, weights may be recorded for equal times of evaporation. In this case values greater than 1.0 indicate evaporation rates greater than butyl acetate.

Water Reactive indicates if the chemical reacts with water to release a gas that is flammable to present a health hazard.

Flash Point indicates the temperature as which a liquid will give off enough flammable vapors to ignite.

Autoignition Temperature refers to the minimum temperature needed to cause combustion in the absence of a spark or flame.

Flammable limits in Air reports the range of gas or vapor concentrations, which will burn or explode if an ignition source is present.

Extinguishing Media gives the fire fighting media suitable for use on the burning material. The standard fire fighting agents are water fog, foam, alcohol foam, CO2, and dry chemicals.

Special Fire Fighting Procedures - whenever water will not work the specific media to be used is specified. Also listed is the necessary personal protective equipment that should be used.

Unusual Fire and Explosion Hazards indicate if the material is an unusual hazard and what special conditions apply. If evacuation is necessary that fact would be listed here.

Carcinogen shows if this product is listed in the National Toxicology Program's Annual Reports and/or has been found to be a potential carcinogen by OSHA or the International Agency for research on cancer. If the chemical is not listed, this is also indiciated.

Health Hazards indicates if acute and/or chronic hazards would result from exposure to the hazardous chemicals. Acute hazards are quickly apparent effects of the chemicals as a result of short-term exposure. Tissue damage or irritation sensations and lethal doses are among those things that are considered. Chronic effects generally result from long-term exposure. The effects may not be immediately apparent and are likely to be of long duration. Long term changes in the body are usually included. Some of these characteristics of the chemicals are:

Carcinogen (cancer causing)	Teratogen (tumor causing)
Mutagen (genetic changes)	Blood dyscrasias (anemia)
Chronic bronchitis	Liver Atrophy (degeneration)
Kidney damage	

Signs and Symptoms of exposure that are the most common sensations that the exposed person will feel are listed. Symptoms of exposure can be varied and many can depend on individual susceptibility, concentration and the type of material. Attention should be given to the effects caused by eye contact, skin contact, inhalation and ingestion.

Emergency First Aid Procedures to be taken in case of eye contact, skin contact, inhalation and ingestion are given. These are emergency procedures only, and a doctor should examine the victim as soon as possible after exposure. Procedures for removing contamination from skin and eyes, neutralization if recommended, treatment for inhalation including use of oxygen or artificial respiration and what to do in case of ingestion are listed.

Personal Protective Equipment to wear when using the material is given. This includes such things as respiratory protection (masks to inhalators), protective gloves, eye protection, hygienic work practices (washing hands/not smoking, etc.) and laundering of contaminated linens.

Precautions for Safe Handling Use and Leak Procedures will list any precautions to be taken in the event of spills or leaks of the material. These would include such things as avoid breathing gases and vapors, avoid skin contact with the product, remove from sources of ignition and special equipment used for clean up such as, glass or plastic scoops and types of containers to use. Also given are specific absorbents, neutralization materials, decontamination materials, and whether evacuation is necessary.

Waste Disposal Method gives the methods of disposal of spilled solids or liquids. Methods must always follow federally, state and local laws. Cautions such as do not flush to sewer or do not incinerate may be included in this section.

Precautions to Take During Handling and Storage lists any special precautions to be taken in storage and handling. Also the conditions for storage such as temperature, ventilation, no smoking or other sources of ignition are also given. Safe storage life is indicated too.

NOTES ON MATERIAL SAFETY DATA SHEETS

Keep in mind a Physician's Desk Reference (PDR) with trained staff is acceptable in lieu of MSDS for pharmaceuticals.

Each of the items in the included list has its own Material Safety Data Sheet **(MSDS)** which is incorporated elsewhere in this program. The master list is incorporated as part of the overall Clinic Safety Program.

This list should be updated regularly as new items are acquired by the facility. As these and other items are purchased or they are purchased through another manufacturer a new MSDS has to be gotten and included in this pack.

Mr. Ricardo G. Aguilos will also be responsible, through his supervisors, for collecting all the Material Safety Data Sheets for all the products we use in this clinic. Any new product ordered and used in this clinic is also required to be added to the above list, and its corresponding MSDS sheet should be acquired immediately, and be added to the MSDS inventory lists.

All MSDS sheets not available yet, should be requested from the manufacturer. Keep in mind, that by law, all manufacturers are responsible to furnish their clients with MSDS sheets. And if they fail to comply with our request for MSDS sheets, we could report them and/or take more severe actions for compliance.

Our local distributor of dental supplies is **Patterson Dental Supply Company.** It is our primary source for MSDS sheets. A complete list of all the main vendors or distributors with telephone numbers where we purchase chemical supplies is available.

A copy of this Proposition 65 is also included within the Posters. If your office has 10 or more employees, this copy should be posted conspicuously in a few places around the clinic so everyone can see it.

CONTAINERS AND LABELING

All containers of hazardous materials entering the clinic shall be checked by the CDA Administrative Staff to assure that they are properly labeled with the chemical name of the contents, the appropriate hazard warning and the name and address of the supplier or manufacturer. These labels may NOT be removed or defaced.

If any of these chemicals are transported or otherwise transferred into smaller containers, the smaller container should also contain the warnings, and precautions of the larger container. This will be done via the original label or by contacting the manufacturer or the distributor, or duplicating the exact label from the larger one and passing it on the smaller container.

If for any reason you happen to come across an unlabeled container, one has to be obtained for it immediately. You may obtain this from the supplier or make up one of your own from the information on the MSDS sheet.

Dental products require a much more systematic form of labeling as given in the proceeding section.

LABELING

It's mandatory for all employers to have a labeling system of the chemical products used in their offices. Some products are exempt from this rule as their labeling have already been approved by the Food and Drug Administration (FDA), Environmental Protection Agency (EPA), Bureau of Alcohol, Tobacco and Firearms, and the Consumer Product Safety Commission.

It's also mandatory for the employer to have the Material Safety Data Sheet (MSDS) on file for each of these products, whether or not they are label exempt. The only exception to this rule is pharmaceutical products. A copy of Physician's Desk Reference (PDR) is available and staff should know how to use it.

A key point to remember is that when a product like Betadine is transferred out of an original container into a secondary container, the new container should also have a label similar to the original one.

Label exempt products:
(Note: exempted products still require an MSDS if they contain a hazard chemical)

The Hazard Communication Standard does not require labeling for the following products:

1) Tobacco or tobacco products.

2) Wood or wood products. The standard was obviously not intended to cover desks, chairs, or doors. However, if you have wood treated with formaldehyde and you are gluing, or cutting it, this would be regulated.

3) Foods, drugs, cosmetics or alcoholic beverages in a retail establishment which are packaged for sale to consumers.

4) Food, drugs, or cosmetics intended for personal consumption by employees while in the workplace.

5) Any drug when it is in final form for patient use.

6) Any household product which is used in the workplace in the same manner as normal consumer use in the home. Use must result in exposure, which is not greater than exposures experienced by consumers. For example, if you use bleach in your office the same way as in your home, then it would not be regulated. However, if bleach is used in any dental procedures, then it would be regulated. You would need to include bleach on your chemical inventory list, have a material safety data sheet for it, and make sure all containers holding bleach are properly labeled.

Procedure

The best way to comply with this requirement is to establish a standard labeling system for the office. This may include labeling a whole tray and then numbering the items on it, or laminating labels to prevent deterioration, or placing them in sheet coverings in a cabinet or shelf corresponding to all the items on that shelf.

The label must contain at least the following information:

1) Name of the product, or chemical name.

2) A system to communicate health hazard data rating, fire and explosion data, and reactivity, with the appropriate PPE required.

3) The entry route to the body.

4) The target organs.

Additionally, for convenience, an MSDS number should be assigned on the label, so the corresponding MSDS is easily found in your files.

Other information may be included on the label such as special handling and precautions.

National Fire Protection Association System

The National Fire Protection (NFPA) a standard system for the identification of the Fire Hazards of Materials in 1957, utilizing the work if the NFPA Sectional Committee on Classification, Labeling and Properties of Flammable Liquids in 1952. The material in its present form was officially adopted in 1961 and revisions in 1964, 1966, 1969 and 1980. This last revision supersedes all previous editions.

The system is entitled NFPA 704-1980 and is a system that applies to facilities for the manufacturing, storage, or use of hazardous materials. It is concerned with the health, fire, reactivity and other related hazards created by short-term exposure as might be encountered under fire or industrial and institutional facilities, but not to transportation or use by the general public.

This program provides a simple system of readily recognizable and easily understood markings, which will give, at a glance, a general idea of the inherent hazard of any material and the order of severity of these hazards as they relate to fire prevention, exposure, and control.

The NFPA system identifies the hazards of a material in terms of three principle categories, namely, "health," "flammability," and "reactivity." It indicates the order of severity numerically by five divisions, ranging from "four (4)" for severe hazard to "zero (0)," which indicated no special hazard.

A fourth space is provided on the NFPA label to indicate unusual reactivity with water, and to alert the fire fighting personnel to the possible hazard of using water is the letter "W" with a line through the center. This space also may be used to indicate other information, such as radioactivity, proper fire extinguishing agents, protective equipment required in case of fire or other emergency, or specific hazard warnings.

This system is intended to give basic information to fire fighting and emergency personnel enabling them to decide whether to evacuate the area or to fight the fire, and guide them in the solution of fire fighting techniques and protective measures.

While this system is basically simple in application, the hazard evaluation, which is required for the precise use of the signals in a specific location, shall be performed by experienced, technically competent persons. Their judgement shall be based on encompassing knowledge of the inherent hazards of different materials, including the extent of change in behavior to be anticipated under condition of exposure to fire, or to fire control procedures.

The system for ranking degrees of hazard is based on relative rather than absolute values. Therefore, it is anticipated that conditions of storage and use may result in different degrees being assigned to the same material by different people of equal competence. Under health hazards, there is consideration not only of the degree of hazard, but also of the protective measures which may be taken to minimize the hazard of short-term exposure.

NFPA Rating refers to the National Fire Protection Association and the rating system used to indicate the health, flammability and reactivity hazards of chemicals. This rating is a special precaution.

RATING SUMMARY

Health: BLUE

4	Danger:	May be fatal on short exposure. Specialized protective equipment required.
3	Warning:	Corrosive or toxic. Avoid skin contact or inhalation.
2	Warning:	May be harmful if inhaled or absorbed.
1	Caution:	May be irritating.
0	No unusual hazard	

Health hazard describes short-term contact or inhalation hazard only.

Flammability: RED

4	Danger:	Extremely flammable liquid or gas with flash point below 73 F and boiling point below 100 F.
3	Warning:	Flammable. Flash point is below 73 F and boiling point above 10 F.
2	Caution:	Flash point is between 100 F to 200 F.
1	Flash point is at or above 200 F.	
0	Normally stable. Not combustible.	

Reactivity: YELLOW

4	Danger:	Explosive material at room temperature.
3	Danger:	May be explosive if shocked, heated under confinement or mixed with water.
2	Warning:	Unsuitable or may react violently if mixed with water.
1	Caution:	May react if heated or mixed with water or other chemicals, but not violently.
0	Stable:	Not reactive when mixed with water.

PPE: WHITE

Could require garments, gloves, eye wear, masks, and respirator or any combination of these. A possible numbering system for these is given below:

4-Respirator, mask, eye wear, gloves, garments
3-Mask, eye wear, gloves, garments
2-Eye wear, gloves, garments
1-Gloves, garments
0-Garments

TRAINING

Employee training is a very crucial aspect of implementing this program. As these programs are very thorough and comprehensive, the training will be repeated periodically to ensure everyone is fully informed on the subject. Some of the parameters of the training are as follows:

1. Training will be provided annually to all employees and to all new employees as hired.

2. Training shall go over the basic requirements of the Hazard Communication Standard and their right to information on chemical hazards.

3. Our clinic's policy to comply with the standard, and procedures to follow to see the standard, and MSDS will also be reviewed.

4. Interpretation and using the labels on containers of hazardous materials is then discussed.

5. The potential physical hazards and health effects of the hazardous substances and how to use the MSDS for more information, and Proposition 65 warnings about chemicals that pose a cancer or reproductive hazard are also reviewed.

6. How to handle the hazardous substance safely and other protective measures in place will then be discussed.

7. Then we will go over what to do in an emergency, release or over-exposure to chemicals.